U.S. EPA's Environmental Technology Verification Program

Building Decontamination Technology Center

What is ETV?

The U.S. Environmental Protection Agency (EPA) established the Environmental Technology Verification (ETV) Program in 1995 to verify the performance of environmental technologies that can solve problems affecting human health or the environment. ETV's mission is to accelerate the use of new environmental technologies in the domestic and international marketplace.

The ETV Program has also been asked to verify technologies with homeland security applications—water security, detecting harmful chemical and biological agents dispersed in buildings and structures, and decontaminating those agents.

ETV provides third-party, quality-assured performance data so buyers and users of environmental technologies can make informed purchase and application decisions. The program operates through public/private partnerships (called Centers) to evaluate the performance of environmental technologies for monitoring, pollution control, and pollution prevention.

Those actively involved in the ETV Program include stakeholders, buyers and users, vendors, permitters, technology experts, and engineers. Additional information is available at: http:// www.epa.gov/etv.

The U.S. Environmental Protection Agency (EPA) has the responsibility to help protect the public in their workplaces and other buildings that may be subject to chemical or biological attack. EPA recently expanded its Environmental Technology Verification (ETV) program to include technologies with homeland security applications. The new ETV Building Decontamination Technology Center will verify the performance of technologies that can decontaminate indoor surfaces in buildings and other structures contaminated with chemical or biological agents from intentional attacks. These buildings may be public- or private-sector facilities frequented by workers and the public.

Battelle, a nonprofit technology research and development organization with headquarters in Columbus, Ohio, has been selected to manage the ETV Building Decontamination Technology Center. In related ETV efforts, Battelle is verifying: (1) technologies that detect chemical and biological agents in indoor environments and (2) technologies that can monitor for intentional contamination of drinking water supplies. Since 1997, in partnership with ETV, Battelle has managed the Advanced Monitoring Systems (AMS) Center, which verifies air and water monitoring technologies.

The ETV Building Decontamination Technology Center (the Center) is currently identifying technology categories for verification testing, seeking interested vendors, developing verification test/quality assurance (QA) plans, conducting independent tests of technologies, and preparing verification reports and statements for each technology tested. Vendors of the verified technologies can use the final verification reports and statements for marketing purposes. Regulators, permitters, and users of the verified technologies can refer to the verification reports and statements to help make permitting and purchasing decisions.

How the Center Works

Assisting the Center is a stakeholder committee whose members are drawn from diverse backgrounds, including academia, federal government agencies and laboratories (e.g., EPA, Department of Defense, Los Alamos National Laboratory), chemical threat specialists, emergency response agencies, and

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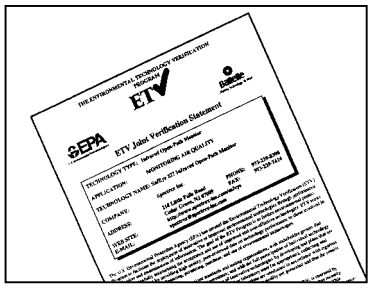
The Center's verification tests evaluate the performance of technologies that can decontaminate buildings and other structures.



The Certek instrument (above) is an example of decontaminant generators for building decontamination. Technology vendors can use the ETV verification reports and statements (at left) in marketing their technologies.

Works *(from page 1)*

other organizations that will buy and use the technologies. The stakeholders help identify and prioritize decontamination technologies for testing, develop test protocols and plans, serve as test observers, and review verification statements and test reports.

Available technologies, possible vendors, and test protocols are identified by the Center and stakeholders. Vendors can also submit their technologies to the Center for verification. Information is compiled about the technologies available, agents tested by the technologies, their effectiveness against agents, and their applicability to decontaminate buildings.

Once a technology has been prioritized for verification, a test/QA plan is drafted by the Center and reviewed by stakeholder volunteers, participating vendors, and EPA representatives. The test location is selected, with input from participating vendors and stakeholders. The Center also seeks collaborators—such as agencies, organizations, or associations—that can provide the test site, testing equipment, technical peer reviews, or other contributions.

The Center conducts the test according to the test/QA plan. Verification testing will range from laboratory-scale tests on building materials to room-scale tests. The laboratory-scale tests will use chemical and biological agents to verify the ability of the technology to kill or remove those agents from building materials. The room-scale tests will use surrogates to verify other factors, for example, the scalability to actual buildings; the operability at a realistic scale (time, effort, and equipment needed for using the technology); necessary personal protective equipment; and coverage (e.g., corners and crevices versus flat walls). Building materials to be considered as candidates for testing include wallboard, painted concrete and wood, and furnishings such as laminate and painted steel.

After the test, the Center drafts a verification report and statement for each technology verified. The draft is reviewed by each vendor's representative, stakeholder volunteers, and EPA officials. After the reports and statements are approved, the statements are signed by an EPA laboratory director. The Center's goal is to complete all future verification tests and reports within six months after the participating vendors sign the vendor agreements.

For additional information, please contact Helen Latham at Battelle: phone 614-424-4062; fax 614-424-5601; or e-mail lathamh@battelle.org.

Benefits of ETV Verification

- Increased public awareness of technologies that can decontaminate buildings
- Reduced anxiety about building contamination
- Access to credible performance data
- Acceptance by regulators and permitters of new technologies or new uses for existing technologies
- More rapid deployment of technologies to meet governmental goals
- Increased varieties of additional building decontamination technologies
- Awareness that technologies undergo objective, third-party testing
- Confidence that technologies can decontaminate buildings and other structures
- Knowledge that trained experts develop and deploy technologies
- Successful building decontamination adds confidence for workforce, visitors, investors, stockholders, lenders.